

A presentation featured at the

2010 Topical Symposium:

Economic Security: Neglected Dimension of National Security?

Hosted by:

The Institute for National Strategic Studies
of
The National Defense University

24-25 August 2010

By

WILLIAM C. WALDEN



Papers presented at NDU Symposia reflect original research by members of NDU as well as other scholars and specialists in national security affairs from this country and abroad. The opinions, conclusions, and recommendations expressed or implied within are those of the authors and do not necessarily reflect the views of the Department of Defense or any other agency of the Federal Government.

Report Documentation Page			Form Approved OMB No. 0704-0188		
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE AUG 2010		2. REPORT TYPE		3. DATES COVERED 00-00-2010 to 00-00-2010	
4. TITLE AND SUBTITLE Migrating to Alternative Energy				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Technikon, LLC, 7601 Harriott Road, Dublin, OH, 43017-9497				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 6	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

Economic Security: Neglected Dimension of National Security

Panel 4: Energy Security Fuels our National Security

Migrating to Alternative Energy

William C. Walden
Technikon, LLC

- U.S. Energy Use 2007:
 - Fossil Sources 85%
 - Non-Fossil 15%
- Renewable % in U.S. 5%
- U.S. exported \$360 billion in 2009 for fossil fuels
- Cost to DoD was \$20 billion in 2008

- Reasons to move from fossil to Renewable Energy:
 - Carbon in the atmosphere
 - Price stability
 - Supply interruption – Dependence on foreign
 - Jobs creation in U.S.
 - Reduce environmental disasters
 - Research science is relatively mature

- Challenges and myths:
 - Low cost of fossil energy, landfill and sewage treatment
 - High cost of new infrastructure
 - R&D is being exported or appropriated
 - Technology at industrial scale is not mature
 - Private sector funding is sitting on the sideline
 - A Pre-Commercialization Gap exists and not being solved on national scale
 - We still believe that research creates manufacturing jobs

Shrinking the Pre-Commercialization Gap

